

## APPENDIX G

### CURRENT PROJECTS ASSOCIATED WITH THE INDIAN RIVER LAGOON SWIM<sup>1</sup> PROGRAM

Project Name	Description	Funding Mechanism
<b>BASIN STUDY AND ASSESSMENT</b>		
<b>Watershed</b>		
Manatee Pocket Study	Study of Manatee Pocket storm water inflows and recommendations for treatment	SWIM
Survey Work for HSPF	Cross-sections of the C-24 Canal and the South Fork of the St. Lucie River will be surveyed to support Hydrologic Simulation Program Fortran (HSPF) analyses	
C-24/North St. Lucie Basin Assessment	Basin assessment for the C-24 and North St. Lucie Basins	
Martin County GIS	Geographic Information Systems (GIS) work to support a storm water management program	SWIM
NRCS Co-Op Study	Monitoring Floridan water use in cooperation with the Natural Resources Conservation Survey (NRCS)	
St. Lucie River Watershed Assessment	Assessments of the C-25,C-23,C-44, and Tidal St. Lucie Basins, and Basins 1, 4, 5, and 6	
Kitching Creek Headwaters Water Quality Improvement	Two part study to 1) evaluate alternative plans; and 2) develop a detailed engineering design for improving the quality, flow, and timing of water into Kitching Creek	
Nutrient Load Monitoring		SWIM
<b>RESEARCH</b>		
<b>Estuary</b>		
Indian River Lagoon and St. Lucie Estuary Monitoring	Water quality monitoring network in the Indian River Lagoon and the St. Lucie Estuary	
Manatee Pocket Sediment Study	Treffrey/FIT study of sediments in Manatee Pocket	
Turbidity/Sea Grass Study	Ecological characteristics and maximum growth of sea grasses at a location experiencing colored water discharge and a location removed from the discharge near Fort Pierce	
Aerial Photographs	Aerial photographs for preparing sea grass maps	
Muck Removal Demonstration Project	Evaluate feasibility of removing muck sediments from the St. Lucie Estuary	
PAR Study	Smithsonian PAR calibration	
Indian River Lagoon Sea Grass Transects	Monitoring two times a year of 6 transects that were installed in September 1994 from Jupiter to St. Lucie Inlet	
Indian River Lagoon Sea Grass Transects - additional monitoring	Additional monitoring of the Indian River Lagoon Sea Grass Transects was done in May 1998 due to Lake Okeechobee regulatory releases	
Sea Grass Mapping	Mapping sea grass lagoonwide from aerial photos and ground truthing	
Indian River Lagoon Bathymetry	Two-year contract to develop Indian River Lagoon bathymetry	

1. SWIM = Surface Water Improvement and Management

<b>Project Name</b>	<b>Description</b>	<b>Funding Mechanism</b>
St. Lucie Estuary Monitoring Network	Monthly monitoring of St. Lucie Estuary network that was revised in 1997 (monthly instead of every 2 weeks; fewer stations)	
St. Lucie Estuary Nutrient Loading Monitoring	Nutrient/sediment loading monitoring within the C-23, C-24, C-25, and C-44 Canals and Five and Ten Mile Creeks	
Aerial Photographs	Aerial photographs for preparing sea grass maps	
Indian River Lagoon Monitoring Network Evaluation	Forty stations monitored quarterly	
Indian River Lagoon Sea Grass Map and Photography	Aerial photographs of the entire lagoon, mapping of sea grasses from photos and ground truthing	SWIM
Sea Grass Data Summary	Trend analysis of sea grass maps; summary of transect data; recommendations for future monitoring - particularly for St. Lucie Estuary Pollutant Load Reduction Goal (PLRG) development	
St. Lucie Initiative Muck	The St. Lucie River Initiative will explore ways to demuck and find beneficial reuse for muck.	
Environmental Toxicity in St. Lucie Estuary/Indian River Lagoon		St. Lucie River Issues Team
Pesticide Reconnaissance within the St. Lucie Estuary		St. Lucie River Issues Team
Watershed and Aquatic Research Assessing Key Environmental Issues in the St. Lucie Estuary		St. Lucie River Issues Team
Fish Health Problems in the St. Lucie Estuary		St. Lucie River Issues Team
St. Lucie Estuary Water Quality		St. Lucie River Issues Team
<b>Watershed</b>		
Distribution of Oysters and Submerged Aquatic Vegetation in the St. Lucie Estuary	Past, current, and future distribution of oysters and submerged aquatic vegetation in the St. Lucie Estuary	
Agrochemical and Nutrient Loadings in the St. Lucie Estuary basin	Characterization of agrochemical and nutrient loadings in runoff from pastures, golf courses, and urban areas in the St. Lucie Estuary basin and nitrogen, phosphorus, and metals from citrus and Vegetables	St. Lucie River Issues Team
Nutrient and Metal Loading in the Indian River Area	Characterization of nitrogen, phosphorus, and heavy metals in surface water runoff from citrus groves and vegetable fields in the Indian River Area	St. Lucie River Issues Team
Water Table Management BMP	Use water table management as a best management practice (BMP) for reducing discharges from Indian River citrus groves	St. Lucie River Issues Team
Citrus and vegetable water quality		St. Lucie River Issue Team
Citrus pesticide BMP		St. Lucie River Issue Team
Golf, urban, pasture water quality		St. Lucie River Issue Team
Indian River Citrus BMPs for equipment operator and applicators		Center for Environmental Studies contract number 56
Virginia Avenue Retrofit - Event Monitoring		
Water Quality/Sediment Monitoring		

<b>Project Name</b>	<b>Description</b>	<b>Funding Mechanism</b>
Watershed Agricultural BMPs	Implementation of BMPs in citrus and vegetable cropping systems in the St. Lucie Estuary and Indian River Lagoon region. This effort will document, demonstrate, and implement BMP effectiveness at improving surface water quality through the reduction of nitrogen and phosphorus.	
<b>EXOTIC REMOVAL</b>		
<b>Watershed</b>		
Exotic Removal – Savannas		Local, SWIM, and SFWMD
North Fork Exotics		SWIM/Water Management Lands Trust Fund
<b>HABITAT RESTORATION</b>		
<b>Estuary</b>		
Mosquito Impoundment Restoration	Restoration of FOS impoundment	
Mosquito Impoundment Restoration	Restoration (culverts, aerators, and pumps) in impoundments: 1-9, 10A, 12, 16A, and 17A	
Mosquito Impoundment Restoration	Restoration (culverts and pump upgrades) in impoundments 5, 9, and 16A	
Mosquito Impoundment Restoration	Restoration (culverts, pump, and aeration station; lengthen 2 pumps) of impoundment 14B; begin restoration of 10A (40-foot vinyl seawall; 4 flowways)	
Mosquito Impoundment Restoration	Impoundments 2, 5, 10A, and others; wading bird study, topographical survey, pump upgrades, and extension; aerator upgrades, convert to dual pump stations, weir, and 2 culverts	
Indian River Lagoon Florida Department of Environmental Protection (FDEP) Mosquito Impoundment Restoration		
Indian River Lagoon Mangrove Planting	Continue experimental mangrove planting technique (year 3); identify biodegradable materials; evaluate success of first two years of program	SWIM
Indian River Lagoon Wetland Restoration	Reconnect isolated tidal wetlands to lagoon; create tidal pools; plant native species on Bureau of Land Management land near the Jupiter Inlet	SWIM
Indian River Lagoon/SLCMCD Mosquito Impoundment	Continue restoration efforts in impoundments 5, 6, and 7	
Mosquito Impoundment Report	Summary of past, current, and future mosquito impoundment restoration projects for SWIM plan update	
North Fork Restoration		St. Lucie River Issue Team
Oyster Restoration		St. Lucie River Issue Team
Martin County Mosquito Control Impoundment Reconnects	Martin County Mosquito Control will reconnect 4 impoundments on the FOS site	
Indian River Lagoon Mangroves - Habitat Restoration		SWIM/Water Management Lands Trust Fund
Indian River Lagoon Snook Tag - Habitat Restoration		SWIM/Water Management Lands Trust Fund

<b>Project Name</b>	<b>Description</b>	<b>Funding Mechanism</b>
Mosquito Impoundment Restoration	Restoration of mosquito impoundments along the Indian River Lagoon and St. Lucie Estuary in both Martin and St. Lucie Counties for habitat and water quality improvements	
Mosquito Reconnection - Habitat Restoration		SWIM/Water Management Lands Trust Fund
TNC Shoreline Restoration		SWIM/Water Management Lands Trust Fund
<b>Watershed</b>		
Mechanical Harvesting Contract	Removing floating aquatic weeds with conveyor belt machinery	
Snook License Plate	10 habitat restoration and environmental education projects	
North Fork Exotic Vegetation Removal	Removal of exotic vegetation on the North Fork of the St. Lucie River	
Sim's Creek Habitat Restoration	Exotic removal, shoreline revegetation, and wetland creation	
Snook License Plate	13 Habitat Restoration and Environmental Education Projects	
Snook License Plate	Habitat Restoration and Environmental Education Projects	
North Fork Habitat Restoration	Restore function of the marshes along the North Fork of the St. Lucie River; reconnection of isolated mangrove marshes would provide acres of habitat, water attenuation, and quality enhancement.	
<b>STORMWATER TREATMENT AREAS</b>		
<b>Watershed</b>		
C-44 Stormwater Treatment Area		St. Lucie River Issue Team